

WHAT IS CLAIMED IS:

1. A color-converting/filter substrate, comprising:

a transparent supporting substrate;

color-converting/filter layers of a single type or a plurality of types that are arranged on said supporting substrate and that each comprise a photopolymerizable resin film of thickness at least 5 μ m containing at least one fluorescent colorant formed in a desired pattern;

a polymeric film layer that covers said color-converting/filter layers and is formed so as to be transparent and flat; and

a transparent inorganic film layer that is formed on said polymeric film layer;

wherein said inorganic film layer is a laminate of one or a plurality of metallic film(s), and one or a plurality of insulating film(s) each containing at least one of Si and Al and at least one of O and N.

2. The color-converting/filter substrate according to claim 1, wherein said metallic film(s) each comprise a metal selected from the group consisting of Ag, Al, Au, Cr, Cu, In, Mo, Ni, Pt, Rh, Ru, W, Zn, and alloys thereof.

3. A color-converting/filter substrate, comprising:

a transparent supporting substrate;

color-converting/filter layers of a single type or a plurality of types that are arranged on said supporting substrate and that each comprise a photopolymerizable resin film of thickness at least 5 μ m containing at least one fluorescent colorant formed in a desired pattern;

a polymeric film layer that covers said color-converting/filter layers and is formed so as to be transparent and flat; and

a transparent inorganic film layer that is formed on said polymeric film layer;

wherein said inorganic film layer is a laminate of one or a plurality of electrically conductive metal oxide film(s) each containing at least one of In, Sn and Zn, and one or a plurality of insulating film(s) each containing at least one of Si and Al and at least one of O and N.

4. A multi-color organic EL display panel, having the color-converting/filter substrate according to any of claims 1 through 3.

5. A method of manufacturing a color-converting/filter substrate, comprising:

forming, on a transparent supporting substrate, color-converting/filter layers of a single type or a plurality of

types that each comprise a photopolymerizable resin film of thickness at least 5 μ m containing at least one fluorescent colorant and have a desired pattern;

forming a flat, transparent polymeric film layer covering said color-converting/filter layers;

forming, using a sputtering method, a metallic film, or a metal oxide film containing at least one of In, Sn and Zn; and

forming an insulating film containing at least one of Si and Al and at least one of O and N.

6. A method of manufacturing a multi-color organic EL display panel, comprising:

forming, on a transparent supporting substrate, color-converting/filter layers of a single type or a plurality of types that each comprise a photopolymerizable resin film of thickness at least 5 μ m containing at least one fluorescent colorant and have a desired pattern;

forming a flat, transparent polymeric film layer covering said color-converting/filter layers;

forming, using a sputtering method, a metallic film, or a metal oxide film containing at least one of In, Sn and Zn;

forming an insulating film containing at least one of Si and Al and at least one of O and N;

forming a first electrode layer;

forming an organic light-emitting layer; and
forming a second electrode layer.